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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/870,619	05/31/2001	Goichi Katayama	FS.16969US0A	1768

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EXAMINER

CORRIGAN, JAIME W

ART UNIT PAPER NUMBER

3748

DATE MAILED: 12/09/2003

14

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/870,619

Applicant(s)

KATAYAMA, GOICHI

Examiner

Jaime W Corrigan

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 29 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-3, 5-19, 21, 23-27 and 30-59 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-3, 5-19, 21, 23-27, 30-36, 48-59 is/are allowed.
- 6) ☒ Claim(s) 37-47 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. §§ 119 and 120**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:  
1. ☒ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_ 6) ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

This Office Action is in response to the Amendment filed on 29 September 2003. Claims 37, 41, 56 have been amended. Claims 4, 20, 22, 28-29 have been canceled. Overall, claims 1-3, 5-19, 21, 23-27, 30-59 are pending in this application. Some of the arguments with respect to the references applied in the previous Office Action were deemed persuasive, however, a new non-final rejection is set forth below.

#### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 37-47 are rejected under 35 U.S.C. 102(b) as being anticipated by Nakamura (PN 5,797,363).

Regarding claim 37 Nakamura discloses an internal combustion engine for an outboard motor comprising an engine body (See Figure 5 (12)), a piston (Inherent in all internal combustion engines) movable relative to the engine body, a crankshaft (See Figure 3 (20)) that extends in a generally vertical direction and is journaled for rotation by the piston, the engine body, the piston and a cylinder head (See Figure 1 (19)) assembly together defining a combustion chamber (Inherent in all internal combustion engines), a port (Inherent in all internal combustion engines) in communication with the combustion chamber, a valve (See Figure 3 (18)) movable between open and closed

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positions of the port, a camshaft (See Figure 1 (16)) that extends generally parallel to the crankshaft and is journaled for rotation to actuate the valve in a set angular position, a variable valve timing mechanism (See Figure 1 (11)) arranged to set the camshaft to an angular position between a first angular position and a second angular portion (See Abstract), the first angular position being advanced (See Column 5 Lines 10-23) as compared to the second angular position, the variable valve timing mechanism comprising a setting section- (See Figure 1 (35), (39)), a supply section (See Figures 1, 4 (55), (56), (60)-(64)) and a control section (See Figure 1 (32)), the control section comprising a control valve (See Figure 1 (32)) that is disposed on along an axis that is generally perpendicular to the camshaft (See Figure 1 (32), (16)), the supply section comprising a first hydraulic passage (See Figure 1 (55), (65), Column 4 Lines 18-26) and a second hydraulic passage (See Figure 1 (56), (60), (64), Column 4 Lines 54-67) that are in hydraulic communication with the setting section (See Figure 1 (56), (60), (64), Column 4 Lines 54-67) and the control section (See Figure 1 (56), (60), (64), Column 4 Lines 54-67), the first (See Figure 1 (55), (65), Column 4 Lines 18-26) hydraulic passage and the second hydraulic passage not (See Figure 1 (56), (60), (64), Column 4 Lines 54-67) extending below a generally horizontal plane that contains a central axis that extends through the control valve (See Figure 1 (32)).

Regarding claim 38 Nakamura discloses the control valve is also positioned generally along an axis that extends transversely across the engine (See Figure 1 (16), (32)).

Regarding claim 39 Nakamura discloses the control valve is positioned near an upper end of the camshaft (See Figure 1 (16), (32)).

Regarding claim 40 Nakamura discloses a bearing cap (See Figure 1 (33)) located near an upper end of the camshaft, the bearing cap configured to cooperate with the cylinder head assembly so as to support the camshaft for rotation (See Column 3 Lines 17-21).

Regarding claim 44 Nakamura discloses a cylinder head cover (See Figure 3 (12), (19)) and wherein the control valve extends through an opening in the cylinder head cover (See Figure 1 (32), (19)).

Regarding claim 45 Nakamura discloses the opening in the head cover (See Figure 1 (32), (19)) includes a lip (See Figure 4 (70)) and a sealing member (See Figure 4 (72)) positioned between the lip and the control valve.

Regarding claim 46 Nakamura discloses a lubrication system (See Figures 1, 4 Column 2 Lines 45-50) and lubrication passages (See Figure 1 (55), (65), (60), (60)-(64), Column 4 Lines 18-26), the lubrication passages including a supply passage (See Figure 1 (55), (65), (60), (60)-(64), Column 4 Lines 18-26) that is in communication with the control section (See Figure 1 (32)).

Regarding claim 47 Nakamura discloses the supply passage is defined, at least in part, in the cylinder head assembly (See Figure 1 (33), (55), (65), (60), (60)-(64), Column 4 Lines 18-26).

Regarding claim 41 Nakamura discloses an internal combustion engine (See Abstract) for an outboard motor comprising an engine body (See Figure 5 (12)), a piston (Inherent in all internal combustion engines) movable relative to the engine body, a crankshaft (See Figure 3 (20)) that extends in a generally vertical direction and is journaled for rotation by the piston, the engine body, the piston and a cylinder head (See Figure 3 (19)) assembly together defining a combustion chamber (Inherent in all internal combustion engines), a port (Inherent in all internal combustion engines) in communication with the combustion chamber, a valve (See Figure 3 (18)) movable between open and closed positions of the port, a camshaft (See Figure 1 (16)) that extends generally parallel to the crankshaft and is journaled for rotation to actuate the valve in a set angular position, a variable valve timing mechanism (See Figure 1 (11)) arranged to set the camshaft to an angular position between a first angular position and a second angular portion (See Abstract), the first angular position being advanced (See Column 5 Lines 10-23) as compared to the second angular position, the variable valve timing mechanism comprising a setting section- (See Figure 1 (35), (39)), a supply (See Figures 1, 4 (55), (56), (60)-(64)) section and a control section (See Figure 1 (32)), the control section comprising a control valve (See Figure 1 (32)) that is disposed on along an axis that is generally perpendicular to the camshaft (See Figure 1 (16), (32)), the

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supply section comprising a first (See Figure 1 (55, (65))) hydraulic passage and a second (See Figure 1 (56), (60), (64), Column 4 Lines 54-67) hydraulic passage that are in hydraulic communication with the setting section (See Figures 1, 4) and the control (See Figures 1,4) section, the first hydraulic passage and the second hydraulic passage not (See Figures 1,4 (56), (60)-(64)) extending through a generally horizontal plane that contains a central axis that extends through the control valve (See Figure 1 (32)), further comprising a bearing cap (See Figure 1 (33)) located near an upper end of the camshaft the bearing cap configured to cooperate with the cylinder head assembly so as to support the camshaft for rotation (See Column 3 Lines 17-21), wherein at least a portion of the first (See Figure 1 (55, (65), Column 4 Lines 18-26) hydraulic passage and second (See Figure 1 (56), (60), (64), Column 4 Lines 54-67) hydraulic passage are formed in the bearing cap.

Regarding claim 42 Nakamura discloses the port is an intake port, the valve is an intake valve, and the camshaft is an intake camshaft (See Column 2 Lines 53-57).

Regarding claim 43 Nakamura discloses an exhaust port (See Column 2 Lines 45-57), an exhaust valve and an exhaust camshaft that extends generally parallel to the intake camshaft (See Column 2 Lines 45-57), wherein the bearing cap is also configured to cooperate with the cylinder head assembly to support the exhaust camshaft for rotation (See Figure 1 (33), Column 3 Lines 17-21), the bearing cap having a single integral body.

***Response to Arguments***

Applicant's arguments filed 29 September 2003 have been fully considered but they are not persuasive.

In response to Applicant's argument that Nakamura discloses supply passages that extend below a generally horizontal plane that contains a central axis that extends through the control valve. It is the Examiner's position that what is above or below a horizontal plane can be arbitrarily determined.

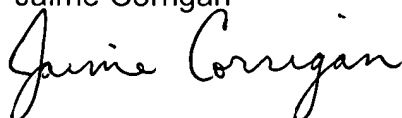
***Conclusion***

Any inquiry concerning this communication from the examiner should be directed to Examiner Jaime Corrigan whose telephone number is (703) 308-2639. The examiner can normally be reached on Monday - Friday from 8:30 a.m. – 6:00 p.m. 2<sup>nd</sup> Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas E. Denion, can be reached on (703) 308-2623. The fax number for this group is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0861.

JC

Jaime Corrigan  





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December 5, 2003

Patent Examiner

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